AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A network device which includes

means for receiving data packets over a link,

a memory for the packets,

means for providing an indication that the occupancy of the memory is less than a first watermark, and

a1 means responsive to said indication for providing a sequence of pause frames

wherein said pause frames in the sequence define for a source of said packets alternating periods in which sending of packets on the link is alternately allowed and prevented.

2. (Original) A network device according to claim 1 wherein said pause frames consist of an alternating sequence of XOFF frames defining a very long cessation of the sending of packets and XON frames defining substantially zero cessation of the sending of packets.

3. (Original) A network device according to claim 1 wherein said means for providing said pause frames is responsive to the increase of the occupancy of the memory above a selected watermark to cease the provision of said sequence of pause frames.

4. (Original) A network device according to claim 3 wherein the aforementioned watermarks are the same.

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5. (Original) A network device according to claim 1 wherein the means for providing pause frames is responsive to an indication that the occupancy of the memory is above a second watermark to send at least one pause frame prescribing cessation of the sending of packets on the link by the source.

6. (Original) A network device which includes

means for receiving data packets over a link,

a memory for the packets,

means for providing an indication that the occupancy of the memory is less than a first watermark, and

means responsive to said indication for providing a sequence of pause frames comprising an alternating sequence of XOFF frames defining a very long cessation of the sending of packets and XON frames defining substantially zero cessation of the sending of packets

wherein said means for providing said pause frames is responsive to the increase of the occupancy of the memory above a selected watermark to cease the provision of said sequence of pause frames.

7. (Original) A network device according to claim 6 wherein the first and selected watermarks are the same.

8. (Original) A network device according to claim 6 wherein the means for providing pause frames is responsive to an indication that the occupancy of the memory is above a second watermark to send at least one pause frame prescribing cessation of the sending of packets on the link to the device.

9. (New) A network device which comprises:

a port for receiving packets from a link;

a memory coupled to said port for temporarily storing said packets;

a memory controller operable to provide an indication when the occupancy of the memory is less than a first watermark; and

a pause frame generator responsive to said indication for providing on said link a sequence of pause frames of predetermined repetition period, wherein said pause frames in the sequence define for a source of said packets alternating periods in which sending of packets on the link is alternately allowed and prevented.

10. (New) A network device as in claim 9 wherein said pause frames comprise an alternating sequence of XOFF frames defining a very long cessation of the sending of packets and XON frames defining substantially zero cessation of the sending of packets.

11. (New) A network device as in claim 9 wherein said pause frames comprise a sequence of pause frames each defining a pause time which is less than said predetermined repetition period.

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12. (New) A network device which comprises:

a port for receiving packets from a link;

a memory coupled to said port for temporarily storing said packets;

a memory controller operable to provide a first indication when the occupancy of the memory is less than a first watermark, and a second indication when the occupancy of said memory is above a selected watermark; and

a pause frame generator responsive to said indication for providing on said link in response to said first indication a sequence of pause frames of predetermined repetition period, wherein said pause frames in the sequence define for a source of said packets alternating periods in which sending of packets on the link is alternately allowed and prevented, said pause frame generator being responsive to said second indication to stop said sequence of pause frames.

13. (New) A network device as in claim 12 wherein said pause frames comprise an alternating sequence of XOFF frames defining a very long cessation of the sending of packets and XON frames defining substantially zero cessation of the sending of packets.

14. (New) A network device as in claim 12 wherein said pause frames comprise a sequence of pause frames each defining a pause time which is less than said predetermined repetition period.

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15. (New) A network device as in claim 12 wherein said selected watermark denotes a greater level of occupancy than said first watermark.

16. (New) A network device as in claim 12 wherein said selected watermark denotes the same level of occupancy as said first watermark.

17. (New) A method for processing data packets at a network device, said method comprising:

receiving packets from a link;

temporarily storing said packets in a memory; and

providing on said link a sequence of pause frames of predetermined repetition period in response to occupancy of the memory becoming less than a first watermark, wherein said pause frames in the sequence define for a source of said packets alternating periods in which sending of packets on the link is alternately allowed and prevented.

18. (New) A method as in claim 17 wherein said pause frames comprise an alternating sequence of XOFF frames defining a very long cessation of the sending of packets and XON frames defining substantially zero cessation of the sending of packets.

19. (New) A method as in claim 17 wherein said pause frames comprise a sequence of pause frames each defining a pause time which is less than said predetermined repetition period.

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20. (New) A method for processing data packets at a network device, said method comprising:

receiving packets from a link;

temporarily storing said packets in a memory;

providing on said link in response to occupancy of the memory becoming less than a first watermark a sequence of pause frames of predetermined repetition period, wherein said pause frames in the sequence define for a source of said packets alternating periods in which sending of packets on the link is alternately allowed and prevented; and

stopping said sequence of pause frames in response to the occupancy of said memory exceeding a selected watermark.

21. (New) A method as in claim 20 wherein said pause frames comprise an alternating sequence of XOFF frames defining a very long cessation of the sending of packets and XON frames defining substantially zero cessation of the sending of packets.

22. (New) A method as in claim 20 wherein said pause frames comprise a sequence of pause frames each defining a pause time which is less than said predetermined repetition period.

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23. (New) A method as in claim 20 wherein said selected watermark denotes a greater level of occupancy than said first watermark.

24. (New) A method as in claim 20 wherein said selected watermark denotes the same level of occupancy as said first watermark.